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Deliverable 3.1

Resilience preparedness/ Business continuity and action plan scheme for automotive SMEs

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About the RESIST “REsilience through Sustainable processes and production for the European automotive InduSTry” project

The RESIST REsilience through Sustainable processes and production for the European automotive InduSTry project has been submitted to the call of proposals SMP-COSME-2021-CLUSTER by five cluster partners. It has been selected for co-funding by the COSME programme of the European Union under the Grant Agreement 101074204.

Project partners are Cluster Pôle Véhicule du Futur - PVF (FR); CEAGA - Galician Automotive Cluster (ES); AUTOKLASTR (CZ); Cluster IDiA - Asociacion Investigacion, Desarrollo E Innovacion En Aragon (ES); and Business Upper Austria – OÖ Wirtschaftsagentur GmbH - The Upper Austrian Economic development agency (TMG/BIZ-UP) (AT). The project lasts from September 1st, 2022, to February 28th, 2025.

The project aims at helping SMEs in their green and digital transition process, as well as to increase their level of resilience in the face of upcoming challenges with emphasis on (1) Stimulating innovation in automotive SMEs (2) Adaptation of technologies and Digitalisation to strengthen SMEs in ATM, and manufacturing industries (3) Training of cluster employees and managers and SMEs employees (4) Networking between automotive clusters to helps SMEs identifying business and innovation partners (5) Internationalisation

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1. Purpose of the resilience check

- The resilience check scheme allows companies to audit their market situation, production, and processes towards potential risks and future market evolutions, and to set-up an action plan for mitigation of the main risks. The scheme helps a company evaluating identified impacts and classifying them depending on their criticality. By this, companies are enabled to prioritise their actions to the most critical impacts. The tool is the basis for the set-up of action plans to mitigate impacts.
- The resilience check and a resulting action plan are mandatory inputs when applying for all the OpenCall in the project to advise SMEs correctly regarding the activity they chose.
- The tool takes about 15 minutes to fill in.
- The tool will not be sent by e-mail, SMEs will complete the resilience check with the project partner who is in contact with them.

2. Preparation steps of the resilience check

On the 14th of November, PVF organised a meeting with Autoklastr to discuss the creation of the resilience check thanks to Autoklastr expertise in the management of companies' risks. Following the meeting, Autoklastr partner sent an example of the resilience check to PVF that can be used as a source of data and a basis for the making of the tool. The tool they used was originally made for large companies.






DESCRIPTION					PREVENTIVE				REACTIVE			
emergency (risk)	assessment			root cause	effect	preventive actions	responsible phone No	date	effective	actions in case of emergency	responsible name & phone	to inform / name & phone
	occurrence frequency	amount of damage	risk classification									
oil leakage 	4	1	M	worn out sealing	lower production output, injury risk	update preventive maintenance plan available absorption material at the machine	Joe Jane	27/11/2022 27/11/2022	✓ ✓	immediate repair apply the absorption material in the machine area, dispose of it through waste disposal bin	shift maintenance mfg. team leader	production manager production manager
fire 			#####									
pollution of water bodies 			#####									
Water damage on tools and products 			#####									
blackout 			#####									

Table 1: Base for the making of the resilience check

PVF prepared internally the tool. The resilience check has been simplified to correspond to the target audience which is Automotive-Transport and Mobility SMEs. The risks were identified thanks to PVF experience with their member SMEs and thanks to risks mentioned in the survey about trends in mobility (T2.1).

On the 12th of January, the Automotive clusters (CEAGA, Autoklastr and PVF) met in a virtual meeting to brainstorm and discuss the table and the risks that PVF prepared to finalise the tool.

3. Resilience check and action plan tool

1. General information						
Company name		Legal status				
Year of establishment		Number of employees	<10	10-49	50-249	>250

2. Main characteristics (Mark X)					
Revenue at end year?	<5 MM	5-9.9 MM	10-24.9 MM	25- 49.9 MM	>50MM
Share of export revenues in total revenue (percentage)	<15%	15-24%	25-49%	50-75%	>75%
Number of clients	<5	5-9	10-14	15-19	>20
Thermal production	<15%	15-24%	25-49%	50-75%	>75%
ISO Standards	IATF	ISO 9001	ISO 14001	ISO 45001	ISO/IEC 27001
	ISO 22301	OHSAS 18001	ISO 50001		

DESCRIPTION					REACTIVE	COMMENTS		
Nr.	Emergency (risk)	assessment			Root cause	Effect	Actions in case of emergency	Additional questions ?
		Occurrence frequency (Likelihood)	Amount of damage (Impact)	Risk classification (L,M,H,E)				
Structural changes								
1.	Impacts of thermal vehicle (ICE) on my business							
2.	Degree of customer dependency with respect to my main customers (any customer share)							

	higher than 30% is very risky)							
3.	Positioning of my product or service portfolio market share (regional or global)							
4.	Perception of the performance of my innovation system							
5.	Competitive positioning in my markets (in relation to my main competitors)							
6.	Competitive risk of substitution of my products by the new							

	products in the market							
7.	Disappearance of function of the automotive (EV)							
8.	Financing of innovation / strengthening of equity capital							
9.	State of my assets: age, production tool, risk of obsolescence (average)							

10.	Investment capacity (in relation to industrial strategy)							
11..	Digital maturity / 4.0 / process digitalization							
12.	Sustainable development,							

	decarbonization of my factory / CSR policy / ESG reporting							
13.	Human resources skills							
14.	Cost of energy							

15.	Cost of raw materials							
16.	Availability of raw materials							
17.	Human resources management / recruitment							

18.	Supply chain: Fluctuating production plans							
19.	Cash flow: short- term financing / Inflation							
20.	Any other to add...							

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Table 2: Resilience check and action plan excel table.

Nr.	Emergency (risk)	assessment			Root cause	Effect	Actions in case of emergency	Additional questions ?
		Occurrence frequency (Likelihood)	Amount of damage (Impact)	Risk classification (L,M,H,E)				
Structural changes								
1.	Impacts of thermal vehicle (ICE) on my business	2	2	M				
2.	Degree of customer dependency with respect to my main customers (any customer share higher than 30% is very risky)	1	2	L				
3.	Positioning of my product or service portfolio market share (regional or global)	3	4	E				
4.	Perception of the performance of my innovation system	2	4	H				

Table 3: Risks analysis with the answers in colours

4. Methodology

To assess risks, RESIST Resilience check is based on six steps:

1. The occurrence frequency of the risk (see Resilience check instructions).
2. The amount of damage (see Resilience check instructions)
3. The result with the risk classification
4. The root cause: SMEs should identify what can cause the risk
5. The effect
6. Actions in case of emergency

5. Resilience check guide

5.1 Risks assessment

Risk Assessment is done using the qualitative approach of the Failure Modes, Effects and Criticality Analysis method (FMECA), allowing the classification of identified risks by criticality, and thereby the identification of non-tolerable risks.

The FMECA method foresees the attribution of two indicators to each risk:

- Amount of damage= D
- Occurrence frequency= F

Each indicator consists of different categories/levels with related values. The product of the values of both indicators results in the Risk classification C:

$$D * F = C$$

In the resilience check, the five impact categories shown in Table 5 are applied.

On a scale of 1 to 5, we define the probability of occurrence and the impact of a risk. The average of both determines the warning level and criticality of the risk.

The Risk classification C allows:

- Classifying all risks depending on their criticality
- Representing all risks in a 5 * 5 matrix for easily interpretation of their criticality

Each risk is classified as L=Light, M= Medium, H=High and E=Extreme.

			Amount of damage				
			Insignificant	Minor	Moderate	Major	Catastrophic
			1	2	3	4	5
Occurrence frequency	Almost Certain	5	M	H	E	E	E
	Likely	4	M	M	H	E	E
	Possible	3	L	M	H	E	E
	Unlikely	2	L	M	H	H	H
	Rare	1	L	L	M	M	H

Table 4: Risk assessment categories

The amount of damage is more significant than the occurrence frequency.

Nr.	Emergency (risk)	assessment		
		Occurrence frequency (Likelihood)	Amount of damage (Impact)	Risk classification (L,M,H,E)
1.	Impacts of thermal vehicle (ICE) on my business	3	2	M
2.	Degree of customer dependency with respect to my main customers (any customer share higher than 30% is very risky)	2	3	H

Table 5: Risk Classification

5.2.1 Amount of damage (Impact)

	Insignificant	Minor	Moderate	Major	Catastrophic
	1	2	3	4	5
Reputation	Internal Review	Scrutiny required by internal committees or internal audit to prevent escalation.	Scrutiny required by external committees or regulators, etc.	Intense public, political and media scrutiny. Eg: front page headlines, TV, etc.	Dedicated external regulatory inquiry or legal actions or adverse national media.
Business Process & Systems	Minor errors in systems or processes requiring corrective action, or minor delay without impact on overall schedule or ability to deliver.	Process / performance parameter occasionally not met or process do not fully meet defined requirements or needs.	One or more key process requirements not met. Inconvenient but not customer relationship threatening.	Process or system not consistent with company goals and targets. Trends show service/process is defective.	Critical system failure, bad performance or ongoing non-compliance. Business severely affected.
Financial (deviation from planned EBIT, or total impact)	<10% or <EUR 10K	>10 % <25%	>25% <50%	>50% <100%	≥100%

Table 6: Impacts

5.2.2 Occurrence Frequency (Likelihood)

	Rare	Unlikely	Possible	Likely	Almost Certain
	1	2	3	4	5
Historical:	May occur but only in exceptional circumstances	Could occur but doubtful	Might occur at some time in the future	Will probably occur	Is expected to occur in most circumstances
Frequency:	Expected to occur less than once in 5 years	Occurs within 5 years time	Occurs within a year's time	Occurs within a month's time	Occurs several times per week

Table 7: Likelihood